

Title (en)
SURGICAL ROBOT, AND GRAPHICAL CONTROL DEVICE AND GRAPHIC DISPLAY METHOD THEREFOR

Title (de)
CHIRURGISCHER ROBOTER UND GRAFISCHE STEUERUNGSVORRICHTUNG UND GRAFISCHES ANZEIGEVERFAHREN DAFÜR

Title (fr)
ROBOT CHIRURGICAL, ET DISPOSITIF DE COMMANDE GRAPHIQUE ET PROCÉDÉ D’AFFICHAGE GRAPHIQUE ASSOCIÉS

Publication
EP 4218652 A1 20230802 (EN)

Application
EP 20956605 A 20201203

Priority

- CN 202011068091 A 20201008
- CN 2020133490 W 20201203

Abstract (en)
A surgical robot, and a graphical control device and graphic display method therefor. The surgical robot includes: an input portion; a display (22); an operating arm (31) having a feature point sequence consisting of feature points arranged orderly, the feature points representing joints; and a controller. The controller is coupled to the input portion, the display (22) and sensors, and configured to: obtain the feature point sequence of the operating arm (31) and a corresponding kinematic model thereof (S11); obtain joint variables sensed by the sensors (S12), and obtain a virtual camera selected by the input portion(S13); determine a projection point of each feature point in the feature point sequence on a projection plane of the virtual camera according to the kinematic model and the joint variables (S14); orderly fit and connect each projection point to generate a projected image of the operating arm (31)(S15); and display the projected image on the display (22)(S16). The surgical robot helps a doctor in observing a motion state of the operating arm (31) in all orientations.

IPC 8 full level
A61B 34/37 (2016.01); **A61B 34/30** (2016.01)

CPC (source: CN EP US)
A61B 34/25 (2013.01 - CN US); **A61B 34/37** (2016.02 - CN EP US); **A61B 90/361** (2013.01 - EP); **G06T 5/80** (2024.01 - US); **G06T 7/0012** (2013.01 - US); **G06T 7/64** (2017.01 - US); **G06T 7/75** (2017.01 - US); **G06T 11/00** (2013.01 - US); **G06T 13/00** (2013.01 - US); **G06V 10/44** (2022.01 - US); **G06V 10/74** (2022.01 - US); **G06V 20/50** (2022.01 - US); **H04N 7/183** (2013.01 - US); **A61B 34/25** (2013.01 - EP); **A61B 2034/2059** (2016.02 - EP US); **A61B 2034/302** (2016.02 - CN); **G06T 2200/24** (2013.01 - US); **G06T 2207/30004** (2013.01 - US); **G06T 2210/41** (2013.01 - US); **G06V 2201/034** (2022.01 - US); **Y02P 90/02** (2015.11 - EP)

Designated contracting state (EPC)
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Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4218652 A1 20230802; CN 111991085 A 20201127; CN 111991085 B 20220304; CN 114601564 A 20220610; CN 114601564 B 20230822; CN 114831738 A 20220802; US 2024065781 A1 20240229; WO 2022073290 A1 20220414

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